

APPROVED BY	O.G. FIG. CLASS SUBCLASS
DRAFTSMAN	

084765588
PC-A096/0004

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2/52	3/52
<i>Fig.1(i)</i>	<i>Fig.1(ii)</i>
4/52	5/52
<i>Fig.1(iii)</i>	<i>Fig.1(iv)</i>

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APPROVED BY DRAFTSMAN	O.G. FIG. CLX 98 960 CLASS
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08/765588
PCT/AU96/00094

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1	TCGGCCTCC	GAAACC	ATG	AAC	TTT	CTG		
			Met	Asn	Phe	Leu		
					1			
50	CTT	GCC	TTG	CTG	CTC	TAC	CTC	CAC
	Leu	Ala	Leu	Leu	Leu	Tyr	Leu	His
					15			
98	CCC	ATG	GCA	GAA	GGA	GGA	GGG	CAG
	Pro	Met	Ala	Glu	Gly	Gly	Gly	Gln
				30				35
146	ATG	GAT	GTC	TAT	CAG	CGC	AGC	TAC
	Met	Asp	Val	Tyr	Gln	Arg	Ser	Tyr
				45				50
194	GAC	ATC	TTC	CAG	GAG	TAC	CCT	GAT
	Asp	Ile	Phe	Gln	Glu	Tyr	Pro	Asp
				60				65
242	TCC	TGT	GTG	CCC	CTG	ATG	CGA	TGC
	Ser	Cys	Val	Pro	Leu	Met	Arg	Cys
					80			
290	CTC	GAG	TGT	GTG	CCC	ACT	GAG	GAG
	Leu	Glu	Cys	Val	Pro	Thr	Glu	Glu
					95			
338	CGG	ATC	AAA	CCT	CAC	CAA	GGC	CAG
	Arg	Ily	Lys	Pro	His	Gln	Gly	Gln
				110				115

Fig.1(i)

APPROVED BY DRAFTSMAN	O.G. FIG. CLASS
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PCT/AU96/00094

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CTG	TCT	TGG	GTG	CAT	TGG	AGC	49	
Leu	Ser	Trp	Val	His	Trp	Ser		
5					10			
CAT	GCC	AAG	TGG	TCC	CAG	GCT	97	
His	Ala	Lys	Trp	Ser	Gln	Ala		
20					25			
AAT	CAT	CAC	GAA	GTG	GTG	AAG	145	
Asn	His	His	Glu	Val	Val	Lys		
					40			
TGC	CAT	CCA	ATC	GAG	ACC	CTG	GTG	193
Cys	His	Pro	Ile	Glu	Thr	Leu	Val	
			55					
GAG	ATC	GAG	TAC	ATC	TTC	AAG	CCA	241
Glu	Ile	Glu	Tyr	Ile	Phe	Lys	Pro	
	70					75		
GGG	GGC	TGC	TGC	AAT	GAC	GAG	GGC	289
Gly	Gly	Cys	Cys	Asn	Asp	Glu	Gly	
	85					90		
TCC	AAC	ATC	ACC	ATG	CAG	ATT	ATG	337
Ser	Asn	Ile	Thr	Met	Gln	Ile	Met	
100					105			
CAC	ATA	GGA	GAG	ATG	AGC	TTC	CTA	385
His	Ile	Gly	Glu	Met	Ser	Phe	Leu	
					120			

Fig.1(ii)

APPROVED BY	O.G. FIG. CLASS / SUBCLASS
DRAFTSMAN	

08/765588
CCW/AS60094

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386	CAG CAC AAC AAA TGT GAA TGC AGA Gln His Asn Lys Cys Glu Cys Arg 125	130
434	GAA AAT CCC TGT GGG CCT TGC TCA Glu Asn Pro Cys Gly Pro Cys Ser 140	145
482	CAA GAT CCG CAG ACG TGT AAA TGT Gln Asp Pro Gln Thr Cys Lys Cys 160	
530	TGC AAG GCG AGG CAG CTT GAG TTA Cys Lys Ala Arg Gln Leu Glu Leu 175	
578	AAG CCG AGG CGG TGAGCCGGGC AGGAG Lys Pro Arg Arg 190	
630	GAACCAGATC TCTCACCAAGG	

Fig.1(iii)

APPROVED BY	O.G. FIG. CLASS 56/58
DRAFTSMAN	

08/765588
TQ/AU9600094

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CCA AAG AAA GAT AGA GCA AGA CAA 433
Pro Lys Lys Asp Arg Ala Arg Gln
135

GAG CGG AGA AAG CAT TTG TTT GTA 481
Glu Arg Arg Lys His Leu Phe Val
150 155

TCC TGC AAA AAC ACA GAC TCG CGT 529
Ser Cys Lys Asn Thr Asp Ser Arg
165 170

AAC GAA CGT ACT TGC AGA TGT GAC 577
Asn Glu Arg Thr Cys Arg Cys Asp
180 185

GAAGG AGCCTCCCTC AGCGTTTCGG 629

649

Fig.1(iv)

APPROVED BY DRAFTSMAN	Q.C. FIG. W-2007-2007	CLASS	SUBCLASS
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7/52	<i>Fig. 2(i)</i>	8/52	<i>Fig. 2(ii)</i>
9/52	10/52	<i>Fig 2(iii)</i>	<i>Fig 2(iv)</i>
11/52	12/52	<i>Fig 2(v)</i>	<i>Fig 2(vi)</i>

APPROVED BY	06-51007
DRAFTSMAN	CLASS SUBCLASS

081765588
PCPAU96/00094

7/52

1 CC ATG AGC CCT CTG CTC CGC CGC
Met Ser Pro Leu Leu Arg Arg
1 5

48 CTG GCC CCC GCC CAG GCC CCT GTC
Leu Ala Pro Ala Gln Ala Pro Val
20

96 CAG AGG AAA GTG GTG TCA TGG ATA
Gln Arg Lys Val Val Ser Trp Ile
35

144 CAG CCC CGG GAG GTG GTG GTG CCC
Gln Pro Arg Glu Val Val Val Pro
50 55

192 GTG GCC AAA CAG CTG GTG CCC AGC
Val Ala Lys Gln Leu Val Pro Ser
65 70

240 GGC TGC TGC CCT GAC GAT GGC CTG
Gly Cys Cys Pro Asp Asp Gly Leu
80 85

288 CAA GTC CGG ATG CAG ATC CTC ATG
Gln Val Arg Met Gln Ile Leu Met
100

336 GGG GAG ATG TCC CTG GAA GAA CAC
Gly Glu Met Ser Leu Glu Glu His
115

Fig.2(i)

APPROVED BY	000 FIG WD 5607007
DRAFTSMAN	CLASS SUBCLASS

08/765588
PCTAU96/00094

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CTG	CTG	CTC	GCC	GCA	CTC	CTG	CAG	47
Leu	Leu	Leu	Ala	Ala	Leu	Leu	Gln	
		10				15		
TCC	CAG	CCT	GAT	GCC	CCT	GGC	CAC	95
Ser	Gln	Pro	Asp	Ala	Pro	Gly	His	
	25				30			
GAT	GTG	TAT	ACT	CGC	GCT	ACC	TGC	143
Asp	Val	Tyr	Thr	Arg	Ala	Thr	Cys	
	40			45				
TTG	ACT	GTG	GAG	CTC	ATG	GGC	ACC	191
Leu	Thr	Val	Glu	Leu	Met	Gly	Thr	
		60						
TGC	GTG	ACT	GTG	CAG	CGC	TGT	GGT	239
Cys	Val	Thr	Val	Gln	Arg	Cys	Gly	
		75						
GAG	TGT	GTG	CCC	ACT	GGG	CAG	CAC	287
Glu	Cys	Val	Pro	Thr	Gly	Gln	His	
		90			95			
ATC	CGG	TAC	CCG	AGC	AGT	CAG	CTG	335
Ile	Arg	Tyr	Pro	Ser	Ser	Gln	Leu	
	105				110			
AGC	CAG	TGT	GAA	TGC	AGA	CCT	AAA	383
Ser	Gln	Cys	Glu	Cys	Arg	Pro	Lys	
	120				125			

Fig. 2(ii)

APPROVED BY	O.G. FIG. CLASS
DRAFTSMAN	

Q84765588
CAT 96/0034

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384	AAA AAG GAC AGT GCT GTG AAG CCA Lys Lys Asp Ser Ala Val Lys Pro 130 135
432	CGT CCC CAG CCC CGT TCT GTT CCG Arg Pro Gln Pro Arg Ser Val Pro 145 150
480	CCC TCC CCA GCT GAC ATC ACC CAT Pro Ser Pro Ala Asp Ile Thr His 160 165
528	GCC CAC GCT GCA CCC AGC ACC ACC Ala His Ala Ala Pro Ser Thr Thr 180
576	GCT GCC GCT GCC GAC GCC GCA GCT Ala Ala Ala Ala Asp Ala Ala Ala 195

Fig. 2(iii)

APPROVED BY	O.G. FIG. NO. 25
DRAFTSMAN	CLASS SUBCLASS

08/765588
PC/PA 095/00094

10/52

GAC	AGG	GCT	GCC	ACT	CCC	CAC	CAC	431	
Asp	Arg	Ala	Ala	Thr	Pro	His	His		
140									
GGC	TGG	GAC	TCT	GCC	CCC	GGA	GCA	479	
Gly	Trp	Asp	Ser	Ala	Pro	Gly	Ala		
155									
CCC	ACT	CCA	GCC	CCA	GGC	CCC	TCT	527	
Pro	Thr	Pro	Ala	Pro	Gly	Pro	Ser		
170				175					
AGC	GCC	CTG	ACC	CCC	GGA	CCT	GCC	575	
Ser	Ala	Leu	Thr	Pro	Gly	Pro	Ala		
185				190					
TCC	TCC	GTT	GCC	AAG	GGC	GGG	GCT	T	624
Ser	Ser	Val	Ala	Lys	Gly	Gly	Gly	Ala	
200				205					

Fig.2(iv)

APPROVED	O. G. FIG.
BY	CLASS / SUBCLASS
DRAFTSMAN	

08/76588
07/09/1994

11/52

625	AGAGCTCAAC	CCAGACACCT	GCAGGTGCCG
685	GACTCAGCAG	GGTGACTTGC	CTCAGAGGCT
745	GGTAAAAAAC	AGCCAAGCCC	CCAAGACCTC
805	GCCTCTCAGA	GGGCTCTTCT	GCCATCCCTT
865	GAGTTGGAAG	AGGAGACTGG	GAGGCAGCAA
825	GGAGTACTGT	CTCAGTTCT	AACCCTCTG
985	CTCCCCTCAC	TAAGAAGACC	CAAACCTCTG
1045	CTGTGACCC	CAACCCTGAT	AAAAGAGATG

Fig. 2(v)

APPROVED BY	O.G. FIG. CLASS / SUBCLASS
DRAFTSMAN	

08/765588
PCT/AU96/00094

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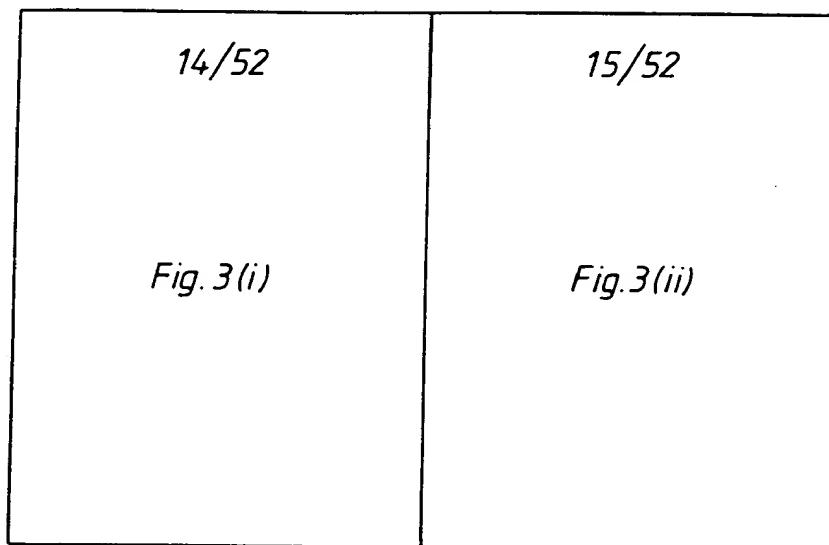
GAAGCTGCGA	AGGTGACACA	TGGCTTTCA	684
ATATCCCAGT	GGGGGAACAA	AGGGGAGCCT	744
AGCCCAGGCA	GAAGCTGCTC	TAGGACCTGG	804
GTCTCCCTGA	GGCCATCATC	AAACAGGGACA	864
GAGGGGTCAC	ATACCAGCTC	AGGGGAGAAT	924
TGCAAGTAAG	CATCTTACAA	CTGGCTCTTC	984
CATAATGGGA	TTTGGGCTTT	GGTACAAGAA	1044
GAAGGAAAAA	AAAAAAAAAAA		1094

Fig.2(vi)

APPROVED BY DRAFTSMAN	O.G. FIG. OMAS 56 570094 SHRGLASS
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OMAS 56 570094

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084765588
OMAS 56 570094

APPROVED BY	Q6516
DRAFTSMAN	CLASS SUBCLASS

08/765588
CTA/US/0094

14/52

>VEGF_HUMAN VEGF_HUMAN VASCULAR ENDOTHELIAL
(VASCULAR 215 AA.
LENGTH = 215

SCORE = 181 (92.4 BITS), EXPECT = 6.4e-20,
IDENTITIES = 33/75 (44%), POSITIVES = 48/75

QUERY: 31 HQRKVVSWIDVYTRATCQPREVVPLTVEL
+++ VV +DVY R+ C+P E +V + E

SBJCT: 36 NHHEVVKFMDVYQRSYCHPIETLVDIFQEY

QUERY: 91 PTGQHQVCRMQILMIR 105
PT + + MQI+ I+

SBJCT: 96 PTEESNITMQIMRIK 110

SCORE = 76 (38.8 BITS), EXPECT = 0.0011,
IDENTITIES = 12/19 (63%), POSITIVES = 16/19

QUERY: 110 QLGEMSLEEHSQCECRPKK 128
++GEMS +H+ CECRPKK

SBJCT: 116 HIGEMSFLQHNKCECRPKK 134

SCORE = 72 (36.8 BITS), EXPECT = 0.0046,
IDENTITIES = 14/21 (66%), POSITIVES = 15/21

QUERY: 202 RCQGRGLELNPDTCRCKLRR 222
RC +R LEVN TCRC K RR

SBJCT: 195 RCKARQLELNERTCRCDKPRR 215

SCORE = 46 (23.5 BITS), EXPECT = 47.,
IDENTITIES = 6/10 (60%), POSITIVES = 9/10

QUERY: 187 DPRTCRCKCR 196
DP+TC+C C+

SBJCT: 181 DPQTCKCSCK 190
SUBSTITUTE SHEET (RULE 26)

Fig.3(i)

APPROVED	O.G. FIG
BY	W.C. 47007
DRAFTSMAN	CLASS SUBCLASS

08/765588
PCTAUS6/00094

15/52

GROWTH FACTOR PRECURSOR (VEGF)

$P = 6.4e-20$
(64%)

MGTVAKQLVPSCVTVQRCGGCCPDDGLECV 90
+ PSCV + RCGGCC D+GLECV
PDEIEYIFKPSCVPLMRCGGCCNDEGLECV 95

POISSON $P(2) = 9.1e-12$
(84%)

POISSON $P(3) = 3.6e-18$
(71%)

POISSON $P(4) = 7.3e-10$
(90%)

Fig. 3(i)

APPROVED BY	O.G. FIG. 1947/2007	CLASS	SUBCLASS
DRAFTSMAN			

08/765588
C/AU9680094

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17/52	18/52
<i>Fig. 4(i)</i>	<i>Fig. 4(ii)</i>
19/52	20/52
<i>Fig. 4(iii)</i>	<i>Fig. 4(iv)</i>

APPROVED	O.G. FIG.
BY	CLASS / SUBCLASS
DRAFTSMAN	

08/765588
PCT/AU96/00094

PCP/AU96/00094

17/52

Gap Weight: 3.00	Average Match: 1.000
Length Weight: 0.100	Average Mismatch: -0.900
Quality: 100.9	Length: 739
Ratio: 0.175	Gaps: 30
Percent	Percent
Similarity: 69.703	Identity: 69.703

28	ATGAGCCCTCTGCTCCGCCGCCTGC
17	ATGAACTTTCTGCT. GTCT. . .
68	TGCAGCTGGCCCCCGCCCCAGGCC
57	TGCTGCTCTACCTCCACCATGCCAA
118	CACCAGAGGA.
06	AGAAGGAGGAGGGCAGAATCATCAC
40	GTGTATACTCGC. GCTACCTGCCAG
52	GTCTATCAGCGCAGCTA. CTGCCAT
94	T. . . . GA. CTGTGGAGCTCAT
01	TCCAGGAGTACCCCTGATGAGATCGA
35	CCCAGCTGCGTGACTGTGCAGCGCT
39	CCATCCTGTGTGCCCTGATGCGAT
85	CCTGGAGTGTGTGCCCACTGGGCAG
89	CCTGGAGTGTGTGCCCACTGAGGAG

Fig. 4(i)

APPROVED BY DRAFTSMAN	O.G. FIG. CLASS 50/2000
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08/765588
P.T.A.V. 96/00094

18/52

TGCTCGCCGCACT	CC	67
. . . TGGGTGCATTGGAGCCTTGCCT		56
TGTCTCCCAGCCTGATGCCCTGGC		117
GTGGTCCCAGGCTGCA . CCCATGGC		105
. AAGTGGTG . . . TCATGGATAGAT		147
GAAGTGGTGAAGTTCATG . . . GAT		151
CCCCGGGAG . . . GTGGTGGTGCCCT		193
CCAATCGAGACCCTGGTGGACATCT		200
GGGCACCGTGGCCAAACAGCTGGTG		234
GTACATCTT . . . CAA G		238
GTGGTGGCTGCTGCCCTGACGATGG		284
GCGGGGGCTGCTGCAATGACGAGGG		288
CACCAAGTCCGGATGCAGAT		329
TCCAACATCACCATGCAGATTATGC		338

Fig.4(ii)
SUBSTITUTE SHEET (RULE 26)

APPROVED BY	O.G. FIG. CLASS W09627007
DRAFTSMAN	

096765588
P&T/EUD60004

19/52

330CCTCATGATCCGGTACC
339 GGATCAAACCTCA.....C
369 GTCCCTGGAAGAACACAGCCAGTGT
376 GAGCTTCCTACAGCACAAACAAATGT
419 GTGCTGTGAAGGCCAGACAGGGCTGC
423 G.....AGCAAGACAAAG.....
469 CGTTCTGTTCCGGGCTGGGACTCTG
443 ...TGTGGGCCTTGCTCAGA.....
519 CATCACCCATCCCACCTCCAGCCCCA
468
569 GC.....ACCACCAAGCGCCC
469 GCATTTGTTGTACAA.....
609 TGCCGACGCCGCAGCTTCCTCCGTT
509 TG.CAAAAAACACAGACTC..GCGTT
657 AACCCAGACACCTGCAGGTGCCGGA
554 AACGAAACGTACTTGCAGATGTGACA

Fig. 4(iii)

APPROVED BY DRAFTSMAN	O.G. FIG. CLASS
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08/765588
PCTAU96/06094

20/52

CGAGCAGTCAGC . . . TGGGGGAGAT	368
CAAG . . . GCCAGCACATAGGAGAGAT	375
GAATGCAGACCTAAAAAAAAGGACA	418
GAATGCAGACC . . . AAAGAAAAGATA	422
CACTCCCCACCACCGTCCCCAGCCC	468
..... AAAATCCC	442
CCCCCGGAGCACCCTCCCCAGCTGA	518
... GCGGAGAA	467
GGCCCCTCTGCCAACGCTGCACCCA	568
..... . A	468
TGACCCCCGGACCTGCCGCTGCCGC	608
. GATCCGCAGACGTGTAAATGTTCC	508
GCCAAGGGCGGGGC . . TTAGAGCTC	656
GC . . AAGGCGAGGCAGCTTGAGTTA	553
AGCTGCGAAGGTGA	695
AGCCGAGGCGGTGA	592

Fig.4(iv)

APPROVED BY	O.G. FIG. CLASS / SUBCLASS
DRAFTSMAN	

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PCT/AU96/00094

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22/52	23/52	24/52
<i>Fig. 5(i)</i>	<i>Fig. 5(ii)</i>	<i>Fig. 5(iii)</i>
25/52	26/52	27/52
<i>Fig. 5(iv)</i>	<i>Fig. 5(v)</i>	<i>Fig. 5(vi)</i>

APPROVED BY	O.G. FIG. W05625H CLASS
DRAFTSMAN	

08/765588
TCT/AU9600094

22/52

165SOMSQ.MSF.msf MSF:687

Type: D Tuesday, June 20, 1995

Check: 3140

1

VEGF165	ATGAACCTTCTGCTGTCTTGGGTG
SOM175	ATGAGCCCTCTGCTCCGCCGCCTG
SOM175-e6	ATGAGCCCTCTGCTCCGCCGCCTG
SOM175-e6&7	ATGAGCCCTCTGCTCCGCCGCCTG
SOM175-e4	ATGAGCCCTCTGCTCCGCCGCCTG

81

VEGF165	CACCCATGGCAGAAGGAGGAGGGC
SOM175	TGCCCTGGCCACCAGAGGAAAGT
SOM175-e6	TGCCCTGGCCACCAGAGGAAAGT
SOM175-e6&7	TGCCCTGGCCACCAGAGGAAAGT
SOM175-e4	TGCCCTGGCCACCAGAGGAAAGT

161

VEGF165	CCAATCGAGACCCTGGTGGACATC
SOM175	GTGGTGGTGCCCTTGACTG . TGGA
SOM175-e6	GTGGTGGTGCCCTTGACTG . TGGA
SOM175-e6&7	GTGGTGGTGCCCTTGACTG . TGGA
SOM175-e4	GTGGTGGTGCCCTTGACTG . TGGA

241

VEGF165	GATGCGATGCGGGGCTGCTGCAA
SOM175	GCAGCGCTGTGGTGGCTGCTGCC
SOM175-e6	GCAGCGCTGTGGTGGCTGCTGCC
SOM175-e6&7	GCAGCGCTGTGGTGGCTGCTGCC
SOM175-e4	GCAGCGCTGTGGTGGCTGCTGCC

Fig.5(i)

APPROVED BY	O.G. FIG.
DRAFTSMAN	CLASS 96 SUB 30 ASS.

08/765588
PCTA 196/00094

23/52

CATTGGAGCCTTGCCTTGCTGCTCTACC
CTGCTCGCCGCACTCCTGCAGCTGGCCC
CTGCTCGCCGCACTCCTGCAGCTGGCCC
CTGCTCGCCGCACTCCTGCAGCTGGCCC
CTGCTCGCCGCACTCCTGCAGCTGGCCC

AGAATCATCACGAAGTGGTGAAGTTCAT
GGTGTCAATGGATAGATGTGTATACTCGC
GGTGTCAATGGATAGATGTGTATACTCGC
GGTGTCAATGGATAGATGTGTATACTCGC
GGTGTCAATGGATAGATGTGTATACTCGC

TTCCAGGAGTACCCCTGATGAGATCGAGT
GCTCATGGGCACCGTGGCCAAAC..AGC
GCTCATGGGCACCGTGGCCAAAC..AGC
GCTCATGGGCACCGTGGCCAAAC..AGC
GCTCATGGGCACCGTGGCCAAAC..AGC

TGACGAGGGCCTGGAGTGTGTGCCCACT
TGACGATGGCCTGGAGTGTGTGCCCACT
TGACGATGGCCTGGAGTGTGTGCCCACT
TGACGATGGCCTGGAGTGTGTGCCCACT
TGACGATGGCCTGGAGTGTGTGCCCACT

Fig.5(ii)

APPROVED BY	O.G. FIG. CLASS 96/2700
DRAFTSMAN	

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80

TCCACCATGCCAAGTGGTCCCAGGGCTG.
CCGCCAGGCCCTGTCTCCCAGCCTGA
CCGCCAGGCCCTGTCTCCCAGCCTGA
CCGCCAGGCCCTGTCTCCCAGCCTGA
CCGCCAGGCCCTGTCTCCCAGCCTGA

160

GGATGTCTATCAGCGCAGCTACTGCCAT
G.....CTACCTGC.CAGCC.CCGGGAG
G.....CTACCTGC.CAGCC.CCGGGAG
G.....CTACCTGC.CAGCC.CCGGGAG
G.....CTACCTGC.CAGCC.CCGGGAG

240

ACATCTTCAAGCCATCCTGTGTGCCCT
TGGTGCCAG.....CTGCGTGACTGT
TGGTGCCAG.....CTGCGTGACTGT
TGGTGCCAG.....CTGCGTGACTGT
TGGTGCCAG.....CTGCGTGACTGT

320

GAGGAGTCCAACATCACCATGCAGATTA
GGGCAGCACCAAGTCCGGATGCAGATCC
GGGCAGCACCAAGTCCGGATGCAGATCC
GGGCAGCACCAAGTCCGGATGCAGATCC
GGGCAGCACCAAGTCCGGATGCAGA...

Fig.5(iii)

APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN	WC	96/27007

08/765588
P.T. 19/06/94

25/52

321

VEGF165	TGCGGATCAAACCTCACCAAGGCC
SOM175	TCATGATCCGG...TACCCGAGCA
SOM175-e6	TCATGATCCGG...TACCCGAGCA
SOM175-e6&7	TCATGATCCGG...TACCCGAGCA
SOM175-e4

401

VEGF165	AAGAAAGATAG.....AGCAA
SOM175	AAAAAGGACAGTGCTGTGAAGCCA
SOM175-e6	AAAAAGGACAGTGCTGTGAAGCCA
SOM175-e6&7	AAAAAGGACAGTGCTGTGAAGCCA
SOM175-e4	AAAAAGGACAGTGCTGTGAAGCCA

481

VEGF165AAGCA.....
SOM175	CTCTGCCCCCGGAGCACCCCTCCCC
SOM175-e6
SOM175-e6&7
SOM175-e4	CTCTGCCCCCGGAGCACCCCTCCCC

561

VEGF165	A.....GATCCGCA
SOM175	GCACCACCAGCGCCCTGACCCCCG
SOM175-E6	GCACCACCAGCGCCCTGACCCCCG
SOM175-e6&7
SOM175-e4	GCACCACCAGCGCCCTGACCCCCG

641

VEGF165	TTGAGTTAACGAAACGTACTTGCA
SOM175	TAGAGCTAACCCAGACACCTGCA
SOM175-e6	TAGAGCTAACCCAGACACCTGCA
SOM175-e6&7
SOM175-e4	TAGAGCTAACCCAGACACCTGCA

Fig.5(iv)

26/52

AGCACATAGGAGAGATGAGCTTCCTACA
GTCAGCTGGGGGAGATGTCCCTGGAAGA
GTCAGCTGGGGGAGATGTCCCTGGAAGA
GTCAGCTGGGGGAGATGTCCCTGGAAGA
.....

GACAAGAA.....AATCCCTGTGG.....
GACAGGGCTGCCACTCCCCACCACCGTC
GATAG.....
GATAG.....
GACAGGGCTGCCACTCCCCACCACCGTC

.....
AGCTGACATCACCCATCCCACTCCAGCC
.....CC
.....
AGCTGACATCACCCATCCCACTCCAGCC

GACGTGTAAATGTTCTGCAAAAAC.AC
GACCTGCCGCTGCCGCTGCCGACGCCGC
GACCTGCCGCTGCCGCTGCCGACGCCGC
.....
GACCTGCCGCTGCCGCTGCCGACGCCGC

687

GATGTGACAAGCCGAGGCAGGTGA
GGTGCCGGAAGCTGCGAAGGTGA
GGTGCCGGAAGCTGCGAAGGTGA
GTGCCGGAAGCTGCGAAGGTGA
GGTGCCGGAAGCTGCGAAGGTGA

Fig.5(v)

APPROVED BY	O.G. FIG.
DRAFTSMAN	CLASS 27007 SUBCLASS

09/765588
PCT/AU98/00094

27/52

400

GCACAAACAAATGTGAATGCAGACC...A
ACACAGCCAGTGTGAATGCAGACCTAAA
ACACAGCCAGTGTGAATGCAGACCTAAA
ACACAGCCAGTGTGAATGCAGACCTAAA
.....CCTAAA

480

.....GCCTTGCTCAGAGCGGAGA
CCCAGCCCCGTTCTGTTCCGGGCTGGGA
.....
.....
CCCAGCCCCGTTCTGTTCCGGGCTGGGA

560

.....TTTGT.....TGTAC..A
CCAGGGCCCCTCTGCCAACGCTGCACCCA
CCAGGGCCCCTCTGCCAACGCTGCACCCA
.....
CCAGGGCCCCTCTGCCAACGCTGCACCCA

640

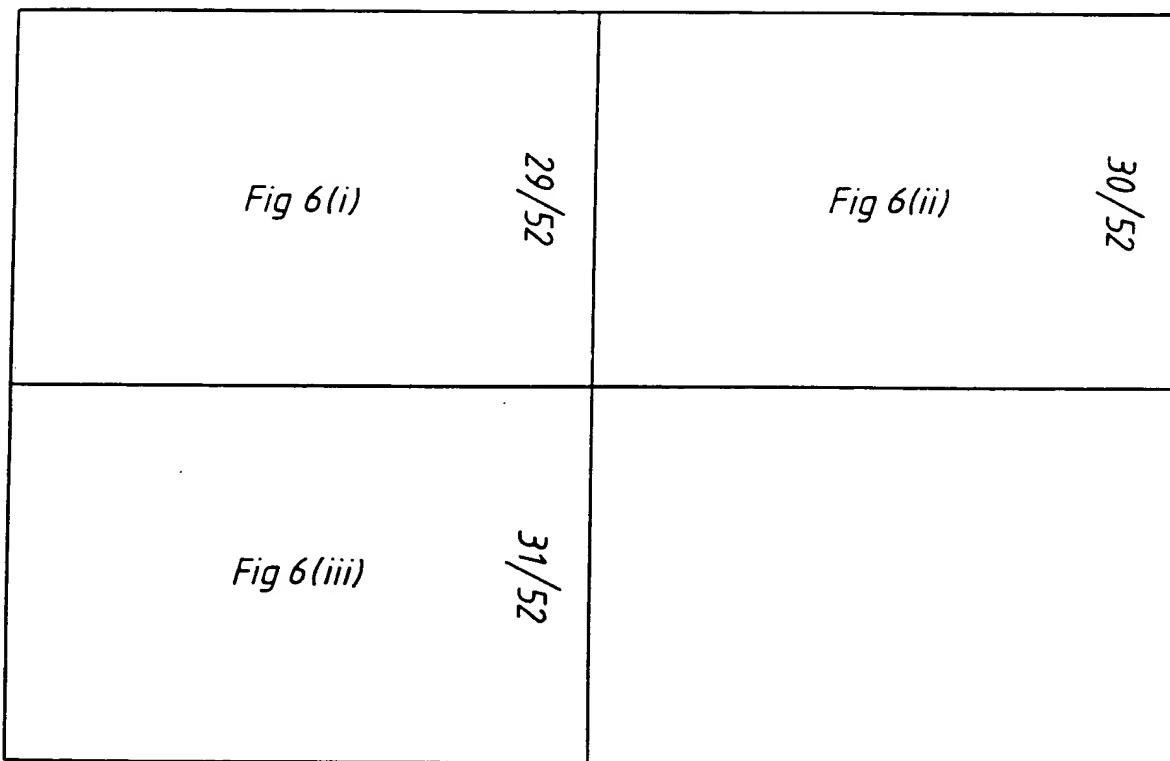
AGACTCG..CGTTGCAAGGCGAGGCAGC
AGCTTCCTCCGTTGCCAAGGGCGGGGCT
AGCTTCCTCCGTTGCCAAGGGCGGGGCT
.....
AGCTTCCTCCGTTGCCAAGGGCGGGGCT

Fig.5(vi)

APPROVED BY DRAFTSMAN	O.G. FIG. CLASS 6200 CLASS
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PCT/AU96/00094

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APPROVED BY	O.G. FIG.
DRAFTSMAN	CLASS SUBCLASS W09627007

08/765588
PCT/AU96/00094

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VEGF165
SOM175 Short

M	N	F	L	L	S	W	V	H	W	S	L	A	L	L	Y	L	H	H	A	K	W	S	Q	A	A	P
M	S	P	L	L	R	R	L	L	.	.	L	A	A	L	L	Q	L	A	P	A	Q	.	.	A	P	

VEGF165
SOM175 Short

I	F	Q	E	Y	P	D	E	I	E	Y	I	F	K	P	S	C	V	P	L	M	R	C	G	G	C	N
L	T	V	E	L	M	G	T	V	A	K	Q	L	V	P	S	C	V	T	V	Q	R	C	G	G	C	P

VEGF165
SOM175 Short

F	L	Q	H	N	K	C	E	C	R	P	K	K	D	R	A	.	.	.	A	P	
L	E	E	H	S	Q	C	E	C	R	P	K	K	K	D	S	A	V	K	P	D	R	A	A	T	P	H	H

VEGF165
SOM175 Short

C	K	C	S	C	K	N	T	D	S	R	C	K	A	R	Q	L	E	L	N	E	R	T	C	R	D	K
H	A	A	P	S	T	T	S	A	L	T	P	G	P	A	A	A	A	D	A	A	S	S	V	A	K	

OR...

VEGF165
SOM175 Long

M	N	F	L	L	S	W	V	H	W	S	L	A	L	L	Y	L	H	H	A	K	W	S	Q	A	A	P
M	S	P	L	L	R	R	L	L	.	.	L	A	A	L	L	Q	L	A	P	A	Q	.	.	A	P	

VEGF165
SOM175 Long

I	F	Q	E	Y	P	D	E	I	E	Y	I	F	K	P	S	C	V	P	L	M	R	C	G	G	C	N
L	T	V	E	L	M	G	T	V	A	K	Q	L	V	P	S	C	V	T	V	Q	R	C	G	G	C	P

VEGF165
SOM175 Long

F	L	Q	H	N	K	C	E	C	R	P	K	K	D	R	A	.	.	.	A	P	
L	E	E	H	S	Q	C	E	C	R	P	K	K	K	D	S	A	V	K	P	D	R	A	A	T	P	H	H

VEGF165
SOM175 Long

G	P	C	S	E	R	R	K	H	L	F	V	Q	D	P	Q	T	C	K	S	C	K	N	T	D	S	
P	R	C	T	Q	H	H	Q	R	.	.	P	D	P	R	T	C	R	C	R	C	R	R	R	S	F	L

Fig.6(1)

APPROVED BY	O.G. FIG. SUBCLASS
DRAFTSMAN	00000000000000000000000000000000

08/765588
PCT/AU96/00094

M A E G G G Q N [H] H E .	V V K F M D V Y Q [R] S Y [C] H [P] I [E] T L [V] D 60
V S Q P D A P G [H] Q R K	V V S W I D V Y T [R] A T [C] C P R E V V V P 55
[D] E G L E C V P T E E S N I T M Q I M R I K P H Q G Q H I G E M S 121	[D] D G L E C V P T G Q I L M I R . Y P S S Q L G E M S 115
[D] E G L E C V P T E E S N I T M Q I M R I K P H Q G Q H I G E M S 121	[D] D G L E C V P T G Q I L M I R . Y P S S Q L G E M S 115
[D] E G L E C V P T E E S N I T M Q I M R I K P H Q G Q H I G E M S 121	[D] D G L E C V P T G Q I L M I R . Y P S S Q L G E M S 115
R P Q P R S V P G W D S A P G A P S P A D I T H P T P A P G P S A 175	R P Q P R S V P G W D S A P G A P S P A D I T H P T P A P G P S A 175
P R R	P R R
G G A	G G A
M A E G G G Q N [H] H E .	V V K F M D V Y Q [R] S Y [C] H [P] I [E] T L [V] D 60
V S Q P D A P G [H] Q R K	V V S W I D V Y T [R] A T [C] Q P R E V V V P 55
[D] E G L E C V P T E E S N I T M Q I M R I K P H Q G Q H I G E M S 121	[D] D G L E C V P T G Q I L M I R . Y P S S Q L G E M S 115
[D] E G L E C V P T E E S N I T M Q I M R I K P H Q G Q H I G E M S 121	[D] D G L E C V P T G Q I L M I R . Y P S S Q L G E M S 115
R Q E N P	R Q E N P
R P Q P R S V P G W D S A P G A P S P A D I T H P T P A P G P L C 177	R P Q P R S V P G W D S A P G A P S P A D I T H P T P A P G P L C 177
R C K A [R Q L E L N E R T C R C D K P R R	R C K A [R Q L E L N E R T C R C D K P R R
R C Q G R G L E L N P D T C R C R K L R R	R C Q G R G L E L N P D T C R C R K L R R

Fig. 6 (iii)

APPROVED	O.G. FIG.
BY	CLASS SUB-CLASS
DRAFTSMAN	W69627067

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PCT/AU96/00094

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Areas of 100% homology are boxed and conserved residues thought to be involved in homodimerisation are underlined. The VEGF sequence depicted includes the 26 amino acid leader sequence (removal of which gives rise to mature VEGF₁₆₅) giving a total length of 191 amino acids.

Homology of SOM175 to VEGF₁₆₅ is 27% (33%) at the protein level, however within this are blocks of 100% homology. In particular, many structural residues are conserved including those thought to be involved in homodimerisation of VEGF (by comparison with PDGF). ie. Cysteine-47

Proline-70, Cysteine-72, Valine-74
Arginine-77, Cysteine-78, Glycine-80, Cysteines-81 & 82
Cysteine-89, Proline-91
Cysteines 122 & 124

Fig.6(iii)

APPROVED BY	O.G. FIG.
DRAFTSMAN	CLASS SURCLASS W0907/007

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PCT/AU96/00094

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SPLICE VARIANTS OF SOM175

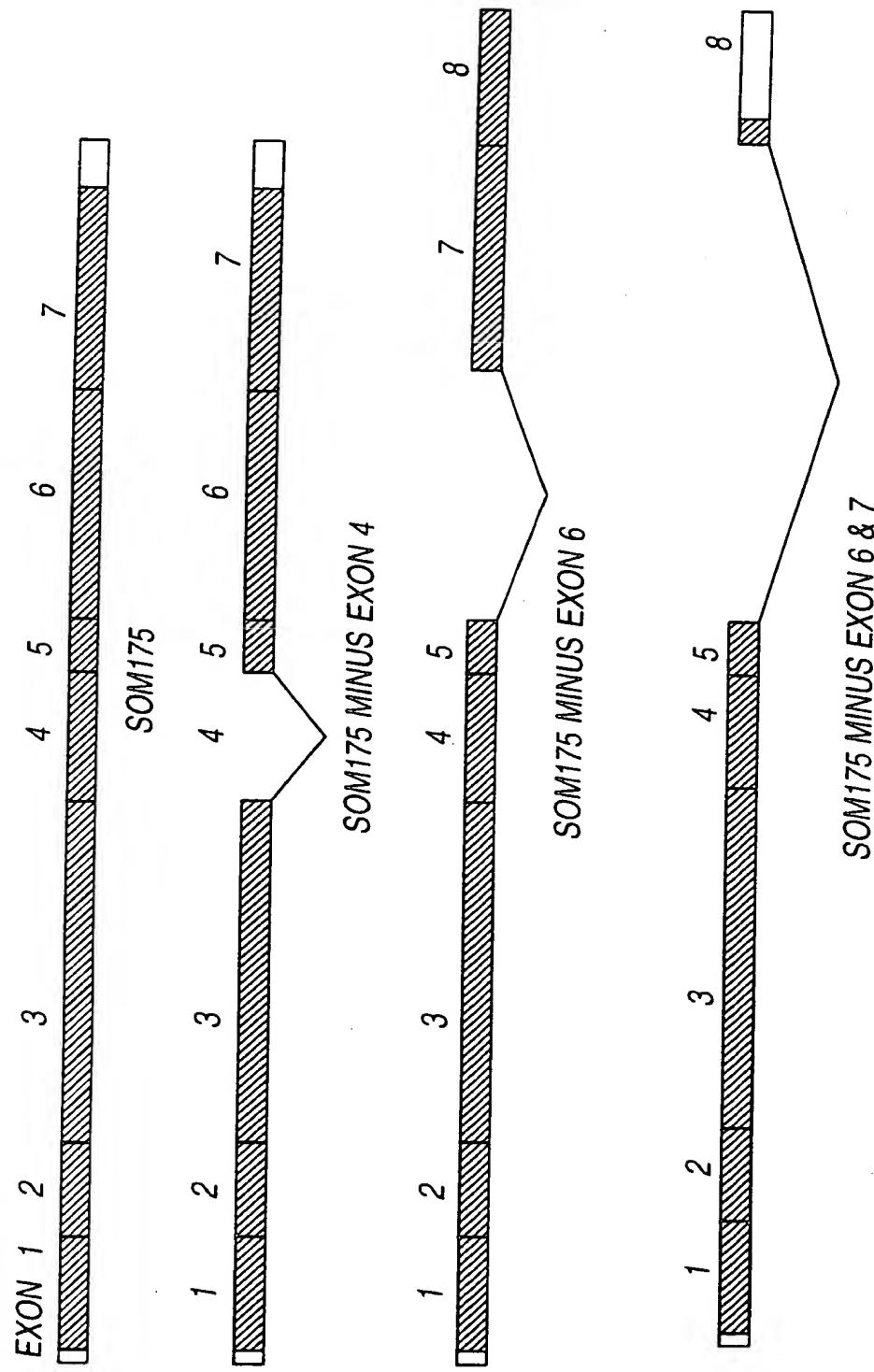


Fig. 7

APPROVED BY	O.G. FIG.
DRAFTSMAN	CLASS 52/00 SUBCLASS

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PCT/AU96/00094

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GENOMIC STRUCTURE OF HUMAN SOM175

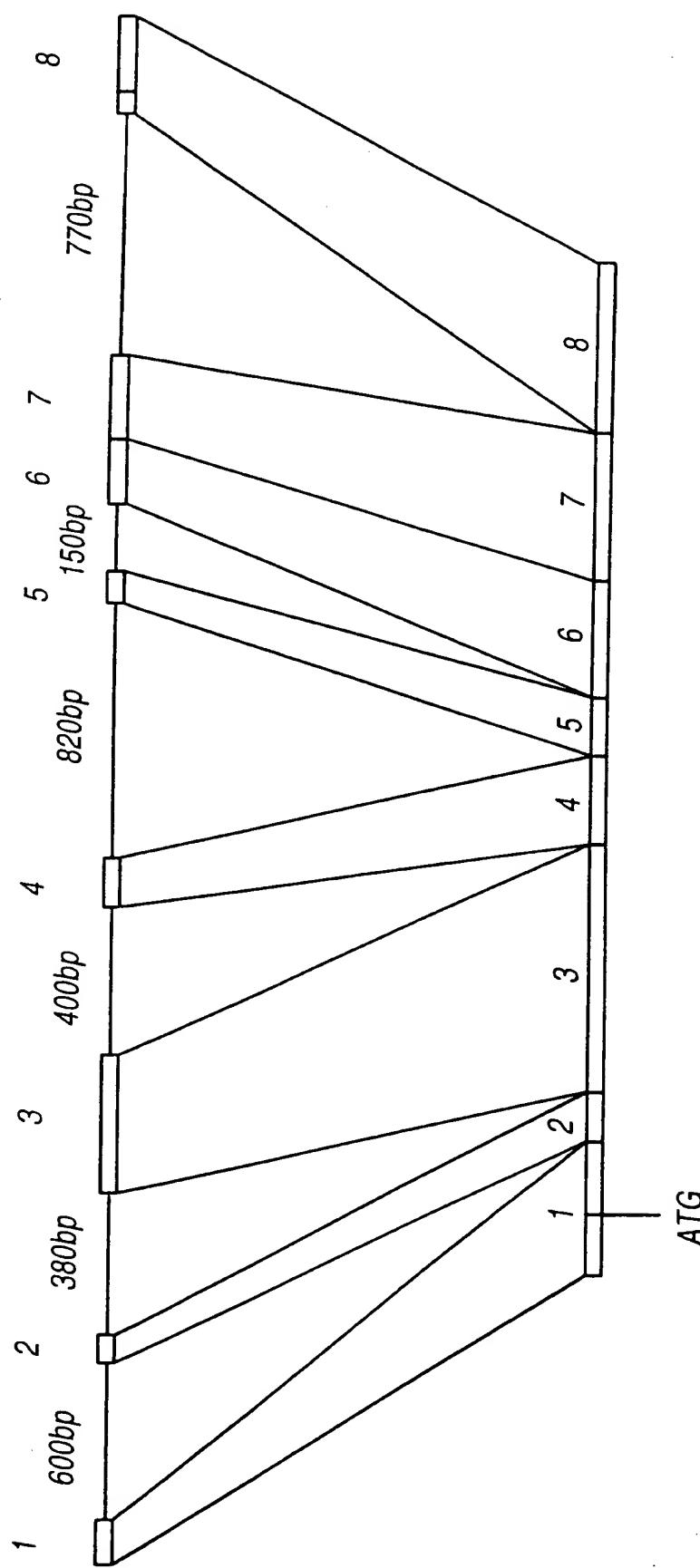


Fig. 8A

APPROVED BY	O.G. FIG.
DRAFTSMAN	CLASS SUBCLASS

08/765588
PCT/AU96/00094

34/52

5' UTR . . . ATGAGG	*Exon 1 (60bp)	GGCCAG gtacgtgagg
tctcccacag GCCCCT	Exon 2 (43bp)	GGAAAG aataacttaca
tctgctccca TGGTGT	Exon 3 (187bp)	ATGCAG gtcccgaggatg
ctgaatacag ATCCCTC	Exon 4 (73bp)	ATGCAG gtgtcaggca
actttcaag ACCTAA	Exon 5 (34bp)	AGACAG gttagtttt
ctcctccgta GGCTGC	Exon 6 (101bp)	CTCCAG ccccaggccc
cccaactccag CCCCAG	Exon 7 (109bp)	ACCCAG acacctgttag
ccctgctcag GTGCCG	*Exon 8 (22bp)	AGGTGA . . . 3' UTR

Fig. 8B

APPROVED BY DRAFTSMAN	O.G. FIG. CLASS PUS/CLASS
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PCT/AU96/00094

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$36/52$ <i>Fig. 9(i)</i>	$37/52$ <i>Fig. 9(ii)</i>
$38/52$ <i>Fig. 9(iii)</i>	$39/52$ <i>Fig. 9(iv)</i>

APPROVED BY	O.G. FIG. CLASS SUBCLASS
DRAFTSMAN	

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PCT/AU96/00094

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-163 gcacgagctcaggccgtcgctgcggcgctg
 -103 gggggccgcggaggagccgccccctgcgccc
 -43 ggccggctctggctgacccccccacacccg

16 CGTCGCCTGCTGCTTGCAC TGCTGCAG
 R R L L L V A L L Q

↓

76 TTTGATGGCCCCAGTCACCAGAAGAAAGTG
 F D G P S H Q K K V

136 ACATGCCAGCCCAGGGAGGTGGTGGTGCCT
 T C Q P R E V V V V P

196 AAACAACTAGTGCCAGCTGTGTGACTGTG
 K Q L V P S C V T V

256 GGCCTGGAATGTGTGCCACTGGGCAACAC
 G L E C V P T G Q H

316 TACCCGAGCAGTCAGCTGGGGAGATGTCC
 Y P S S Q L G E M S

376 CCTAAAAAAAAGGAGAGTGCTGTGAGGCCA
 P K K K E S A V R P

436 CAGCCCCGCTCTGTTCCGGGCTGGGACTCT
 Q P R S V P G W D S

Fig.9(i)

APPROVED BY DRAFTSMAN	O.G. FIG. CLASS SUBCLASS
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PCT/AU96/00094

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cgttgcgcgtgcctgcgcggcagggtcggt ccgccccgggtccccgggtccgcgcgcattgg ccgggttagggccccg <u>ATGAGCCCCCTGCTG</u>	M S P L L	-17
CTGGCTCGCACCCAGGCCCTGTGTCCCAG	L A R T Q A P V S Q	4
GTGCCATGGATAGACGTTATGCACGTGCC	V P W I D V Y A R A	24
CTGAGCATGGAACTCATGGGCAATGTGGTC	L S M E L M G N V V	44
CAGCGCTGTGGCTGCTGCCCTGACGAT	Q R C G G C C P D D	64
CAAGTCCGAATGCAGATCCTCATGATCCAG	Q V R M Q I L M I Q	84
CTGGGAGAACACAGCCAATGTGAATGCAGA	L G E H S Q C E C R	104
GACAGGGTTGCCATACCCACCAACCGTCCC	D R V A I P H H R P	124
<u>ACCCCGGGAGCACCCCTCCCCAGCTGACATC</u>	T P G A P S P A D I	144

Fig.9(ii)

APPROVED BY	O.G. FIG 10000000007
DRAFTSMAN	CLASS SUBCLASS

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PCTAU96/00094

38/52

496 ATCCATCCCAC TCCAGCCCCAGGATCCTCT
 I H P T P A P G S S
 S P R I L

556 CTGACCCCCGGACCTGCCGTTGCCGCTGTA
 L T P G P A V A A V
 P D P R T C R C R C

616 GGGGCTTAGAGCTCAACCCAGACACCTGTA
 G A *
 R G L E L N P D T C

676 ctttccagactccacgggcccggctgctt
 736 agcacaggcgtaacctcctcagtctggag
 796 gagctctctcgccatctttatctcccaga
 856 atgtctcacctcagggccagggtactctc
 916 ttctggctggctgtctccctcactatgaa
 976 gggttctgttatgataactgtgacacacac
 1036 gacactaaaaaaaaaaaaaaaaaaaaaaa

Fig.9(iii)

APPROVED BY	O.G. FIG.
DRAFTSMAN	CLASS SUBCLASS

08/765588
PCT/AU96/00094

39/52

GCCCGCCTTGCACCCAGCGCCGCCAACGCC	
A R L A P S A A N A	164
C P P C T Q R R Q R	130
GACGCCGCCGCTTCCTCCATTGCCAACGGC	
D A A A S S I A K G	184
R R R R F L H C Q G	150
↓	
GGTGCCGGAAGCCGCGAAAGTGA <u>c</u> aagctg	
R C R K P R K *	186
	167
tatggccctgcttcacagggagaagagagtgg	
gtcactgccccaggacctggacctttaga	
gctgccatctaacaattgtcaaggaacctc	
tcacttaaccaccctggtcaagtgagcatc	
aaccccaaacttctaccaataacgggattt	
acacactcacactct <u>gataaa</u> agagatgga	
aaaaaaaaaaaaaa	

Fig.9(iv)

APPROVED BY	O.G. FIG.
DRAFTSMAN	CLASS/ SUBCLASS

08/765588
PCPAUS6/00094

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41/52

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Fig 10(i)

Fig 10(ii)

APPROVED BY DRAFTSMAN	O.G. FIG. CLASS WO 96/27007 SUBCLASS
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PCT/AU96/00094

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A

mVRF167 -21 MSPLLRRLLLVALQLARTQAP

mVRF167 30 EVVVPLSMELMGNVVKQLVPSC

mVRF167 80 ILMIQYPSSQLGEMSLGEHSQC

mVRF167 130 RPDPTCRCRCKRRFLHCQGR

B

mVRF186 116 RVAIPHHRPQPRSVPGWDSTPG

hVRF186 166 TPGPAAAAADAAASSVAKGGA*

mVRF186 166 TPGPAVAAVDAAASSIAKGGA*

Fig. 10(i)

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VSQPDAPGHQRKVVSVIDVYTRATCQPR	29
: :	
VSQFDGPGSHQKKVVPWIDVYARATCQPR	29
: :	
VTVQRCGGCCPDDGLECVPTGQHQVRMQ	79
: :	
VTVQRCGGCCPDDGLECVPTGQHQVRMQ	79
ECRPKKKDSAVKPDSPRPLCPRCTQHHQ	129
: : : :	
ECRPKKKESAVRPDSPRILCPPCTQRRQ	129
GLELNPDTCRCKLRR*	167
: :	
GLELNPDTCRCKPRK*	167
APSPADITHPTPAPGPSAHAAPSTTSAL	165
:	
APSPADIIHPTPAPGSSARLAPSAAANAL	165
186	
186	

Fig. 10(ii)

APPROVED	O.G. FIG.
BY	WORKS CLASS
DRAFTSMAN	

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PCT/AU96/00094

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Fig 11(i)

Fig 11(ii)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

APPROVED	O.G. FIG.
BY	CLASS SUBCLASS
DRAFTSMAN	

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PCT/AU96/00094

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mVRF167	-21	MSPLLRRLL..LLVALLQL..	
		:: :	
mVEGF188	-26	MNFLLSWVHWTLALLLYLHH	
mVRF167	25	TCQPREVVVPPLSMELMGNVV	
		: : : ::	
mVEGF188	24	YCRPIETLVDIFQEYPDEIE	
mVRF167	75	QVRMQILMIQYPSSQ.LGEM	
		: : :	
mVEGF188	74	NITMQIMRIKPHQSQHIGEM	
mVRF167	119ILCPPC	
		:	
mVEGF188	124	QKRKRKKSRFKSWSVHCEPC	
mVRF167	152	GLENPDTCRCKPRK	
		:	
mVEGF188	173	QLELNERTCRCDKPERR	

Fig.11(i)

APPROVED	O.G. FIG.
BY	CLASS / SUBCLASS
DRAFTSMAN	

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PCT/AU96/00094

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AR. TQAPVSQFDGPSHQKKVVPWIDVYARA	24
: : : : : :	
AKWSQAAPTT . EGEQKSHEVIKFMDVYQRS	23
 KQLVPSCVTVQRCGGCCPDDGLECVPTGQH	74
: : : :: ::	
YIFKPSCVPLMRCAGCCNDEALECVPTSES	73
 SLGEHSQCECRPKKKESAVRPDSPR	118
: :	
SFLQHSRCECRPKKDRTKPEKKSVRGKGKG	123
 TQRQRQR . . . PDPRTCRCRCKRRFLHCQGR	151
: : : : : :	
SERRKHLFVQDPQTCKCSCKNTDS . RCKAR	172
 167	
 188	

Fig. 11(ii)

APPROVED BY	O.G. FIG. CLASS SUBCLASS G1465 2700
DRAFTSMAN	

08/765588
PCT/AU96/00094

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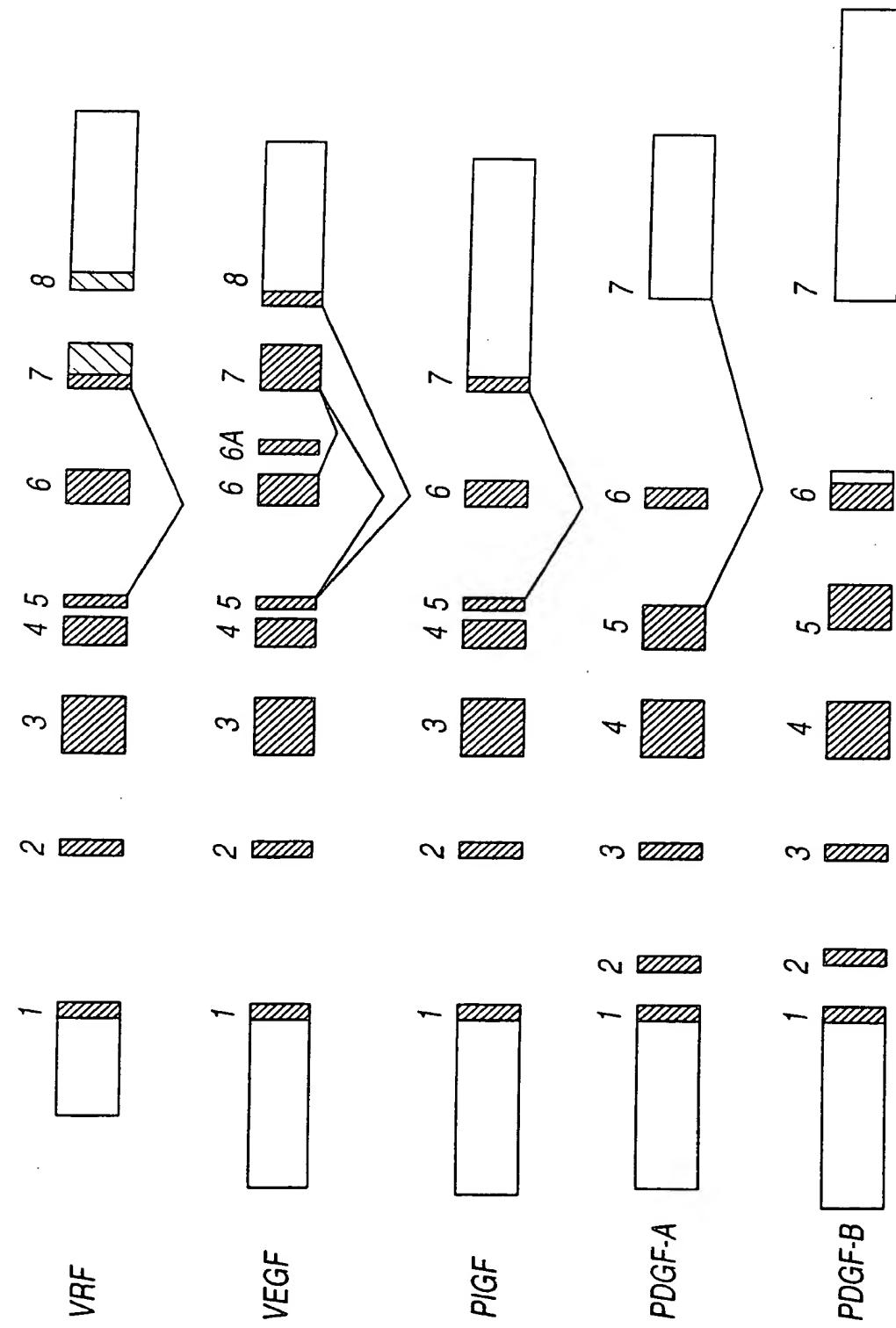


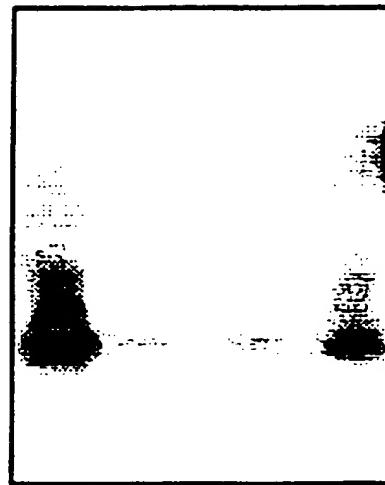
Fig.12

APPROVED	00 FIG.	BY	CLASS	SUBCLASS
DRAFTSMAN				

08/765588
PCT/AU96/00094

47/52

heart
liver
lung
muscle



1.3kb

Fig.13

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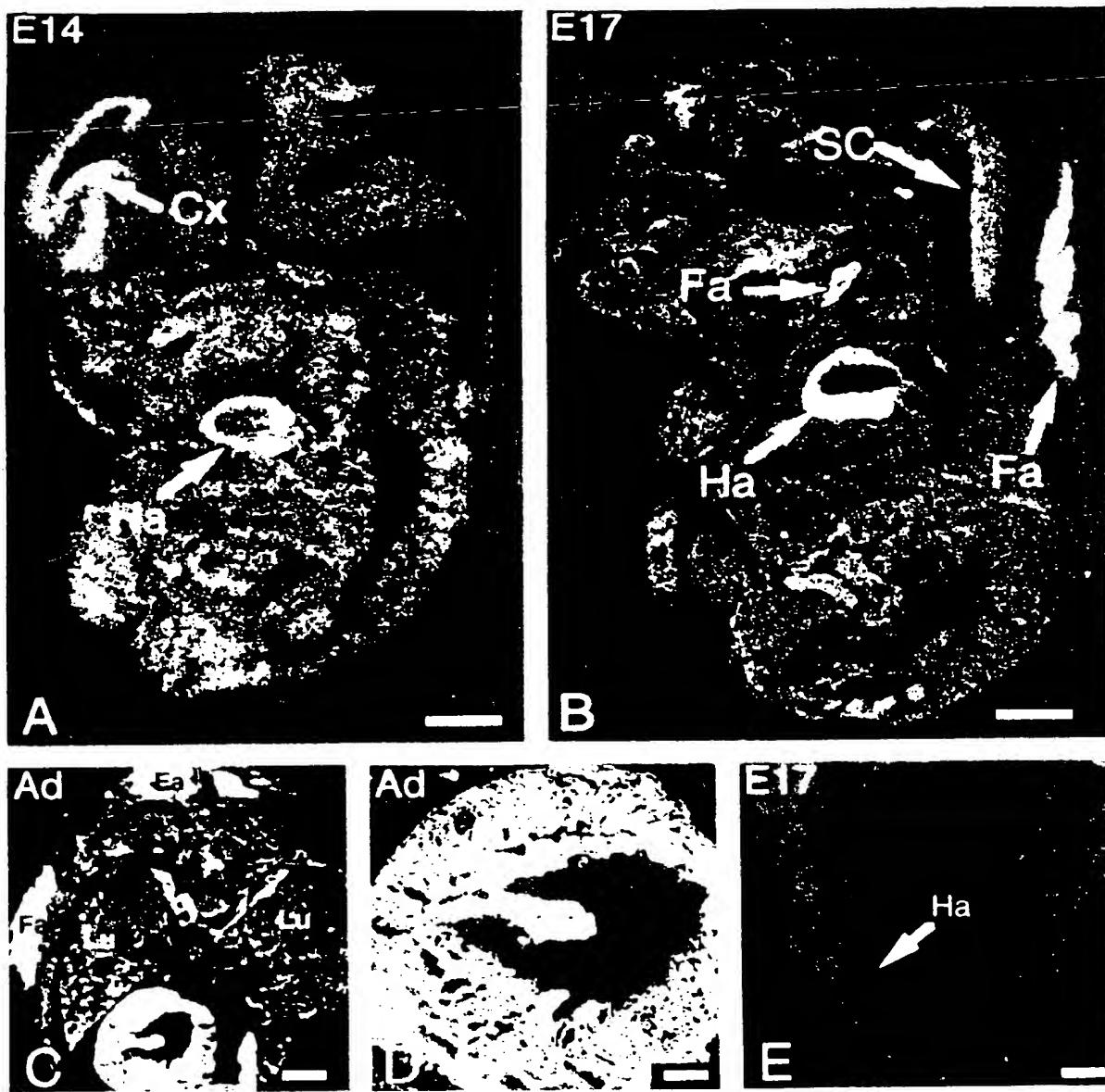


Fig.14

APPROVED BY DRAFTSMAN	O.G. FIG. CLASS WO 96/27007	SUBCLASS
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PCT/AU96/00094

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Fig. 15

APPROVED BY	O.G. FIG.
	CLASS SUBCLASS
DRAFTSMAN	

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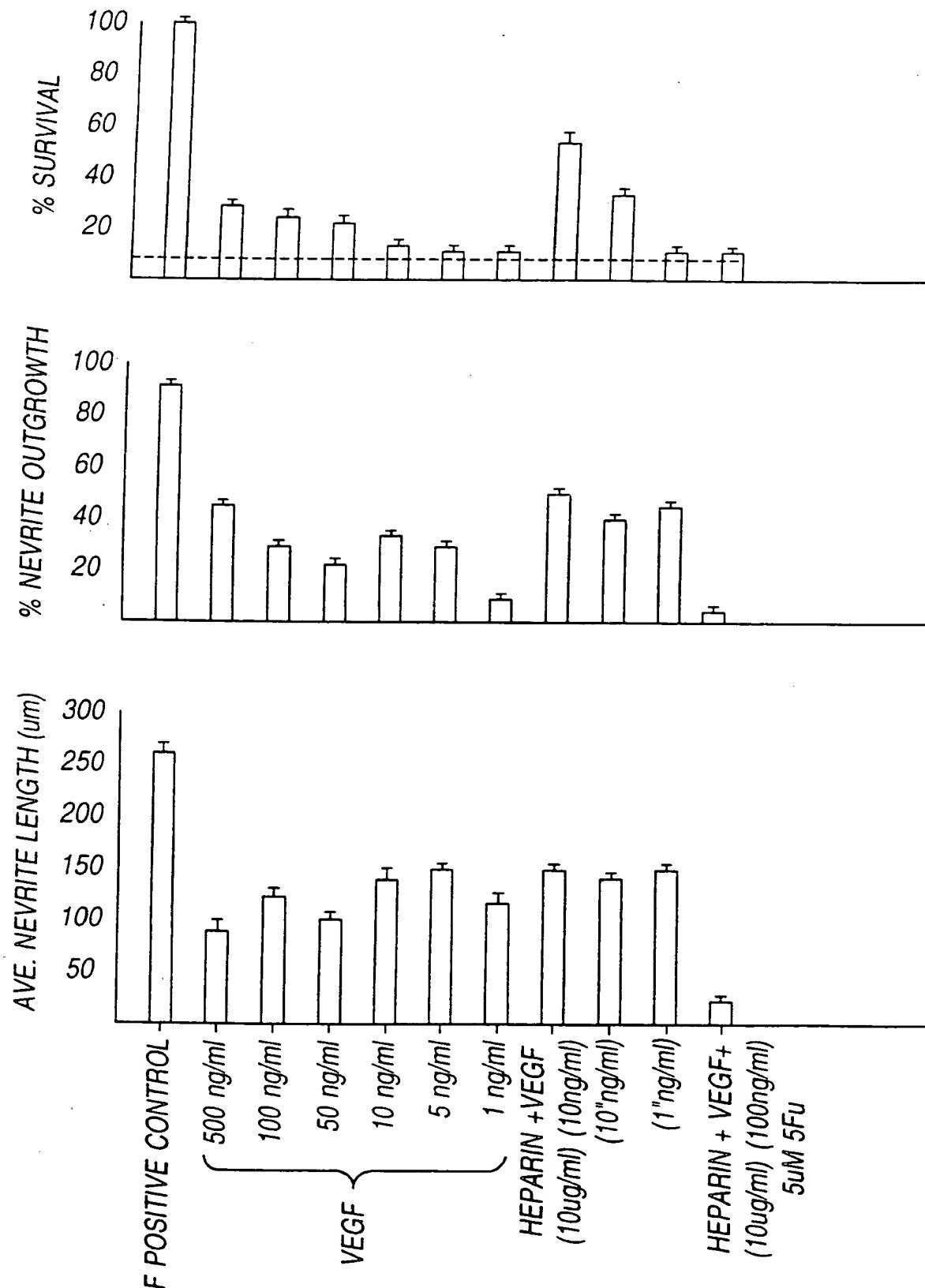


Fig. 16

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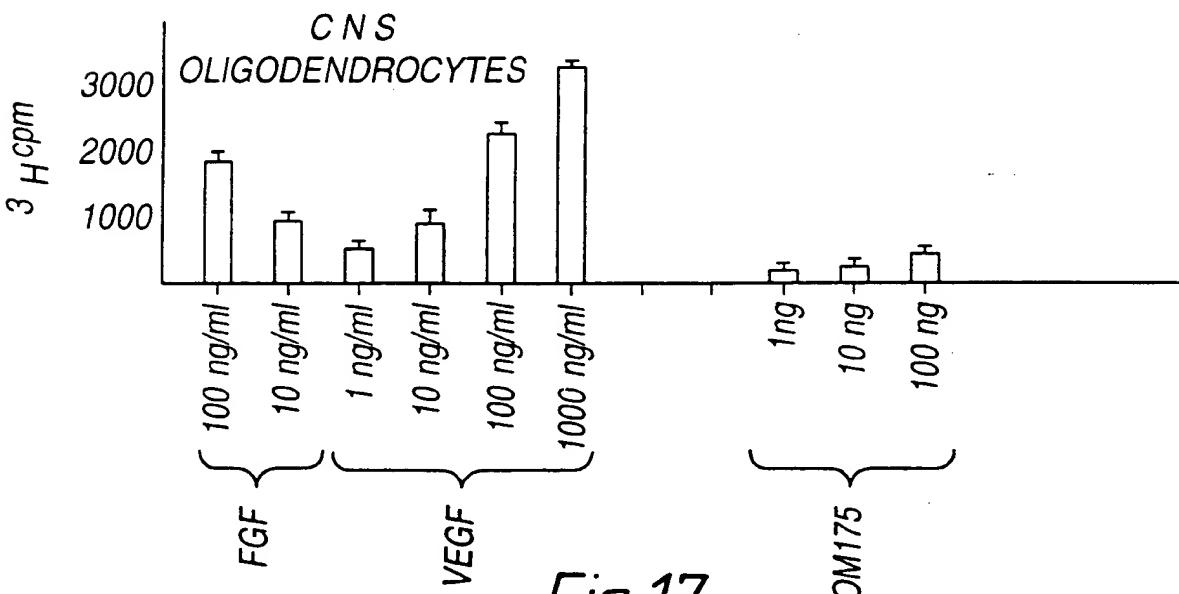
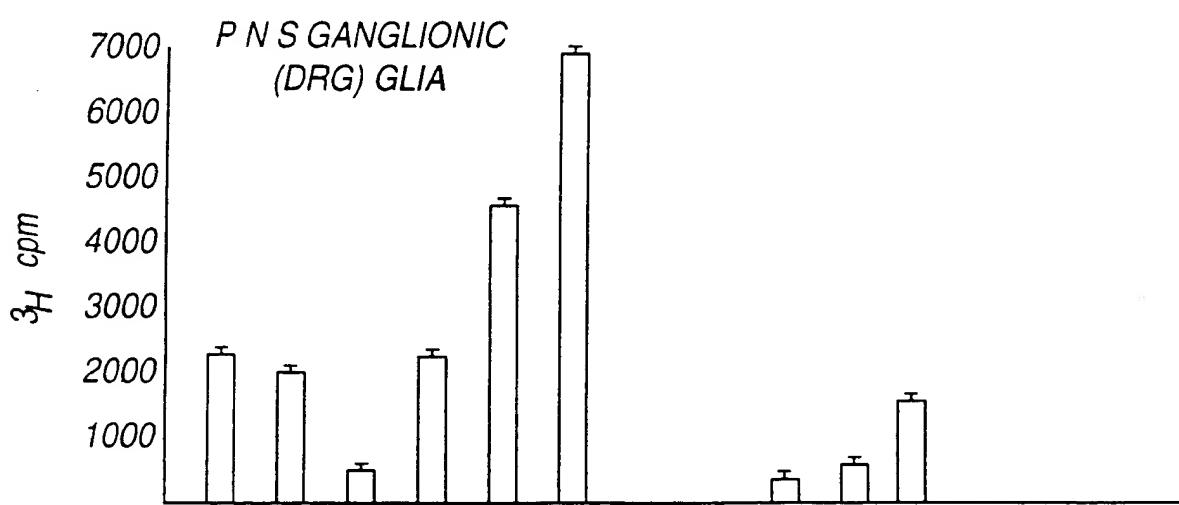
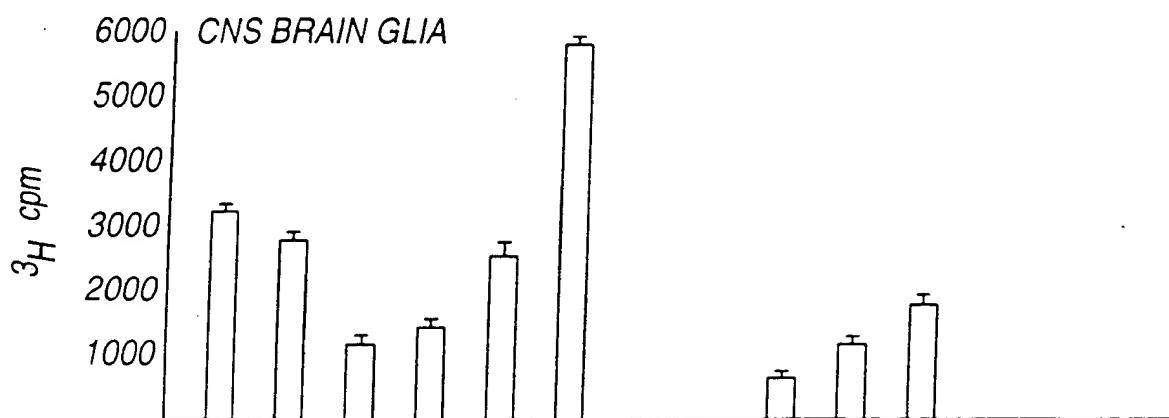


Fig.17
SUBSTITUTE SHEET (RULE 26)

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MOUSE ASTROGLIAL CELLS

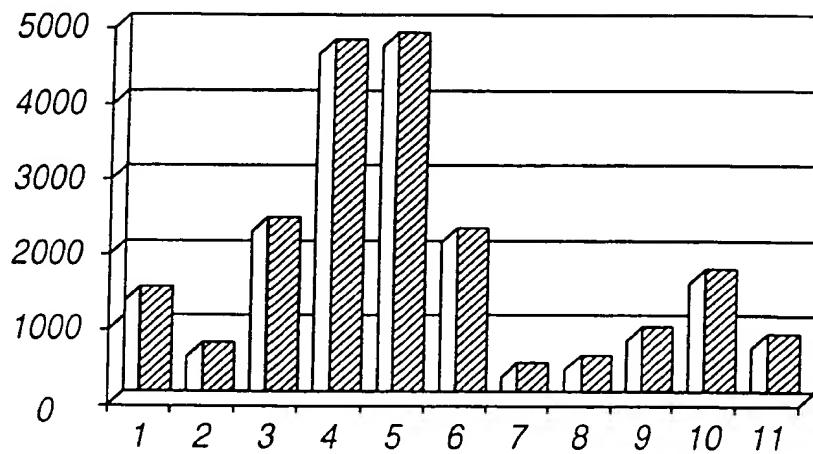


Fig.18

MOUSE OLIGODENDROGLIAL CELLS

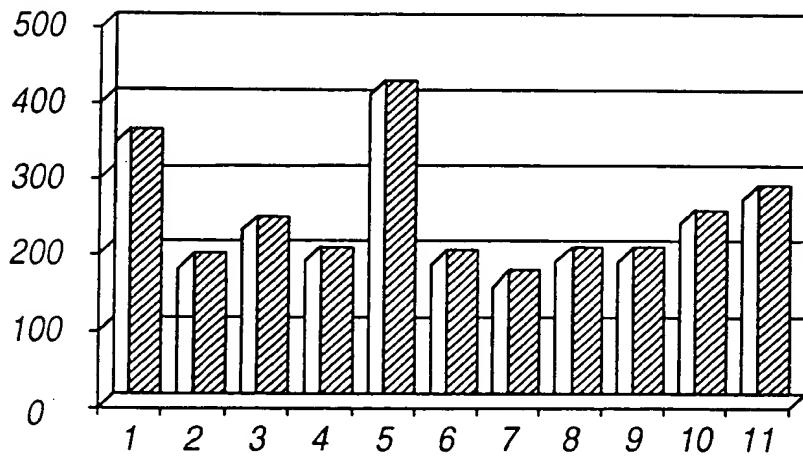


Fig.19

MOUSE FOREBRAIN NEURONS

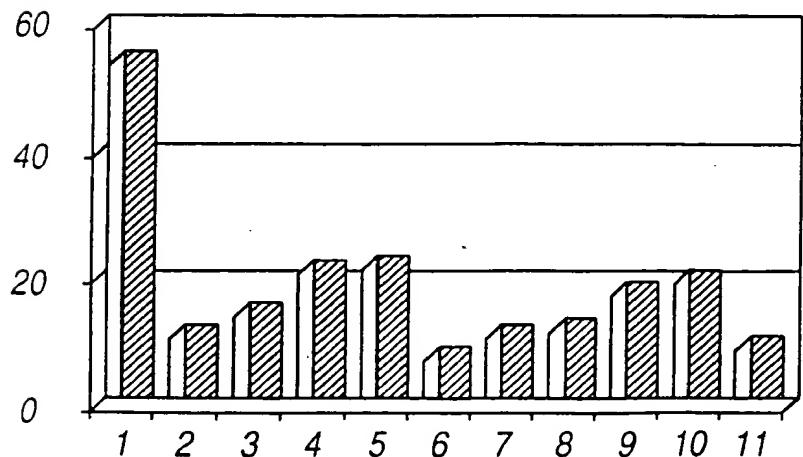


Fig.20